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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,850	06/21/2001	Alexander M. Franz	80398.P178C	8091

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EXAMINER

LERNER, MARTIN

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,850

Applicant(s)

FRANZ ET AL.

Examiner

Martin Lerner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 to 35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 to 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/31/03;10/27/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: See Continuation Sheet.

DETAILED ACTION

Drawings

1. The drawings are objected to because they are informal. The drawings submitted 13 August 2001 have numerous instances of hand written and hand drawn elements.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 8 to 12, 19 to 22, 25, and 32 to 35 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 12 of U.S. Patent No. 6,356,865. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the current application set forth the same subject matter as the claims of the patent.

Specifically, corresponding claims set forth the limitations of independent claim 1:

A method for performing spoken language translation, comprising:

receiving at least one speech input comprising at least one source language;

recognizing at least one source expression of the at least one source language;

translating the recognized at least one source expression from the at least one source language to at least one target language;

synthesizing at least one speech output from the translated at least one target language; and

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providing the at least one speech output.

Corresponding claims set forth the limitations of claim 8:

performing morphological analysis of the recognized at least one source expression using at least one source language dictionary and at least one source language morphological rule;

generating at least one sequence of analyzed morphemes;

performing syntactic source language analysis using grammar rule-based processing and example-based processing;

generating at least one source language syntactic representation based on the source language analysis; and

performing source language to target language transfer using at least one example database and at least one thesaurus, wherein the morphological analysis and the syntactic source language analysis and independent of the transfer and a domain.

Corresponding claims set forth the limitations of independent claim 12:

An apparatus for spoken language translation comprising:

at least one processor;

an input coupled to the at least one processor, the input capable of receiving speech signals comprising at least one source language, the at least one processor configured to translate the received speech signals by:

recognizing at least one source expression of the at least one source language;

translating the recognized at least one source expression from the at least one source language to at least one target language;

synthesizing at least one speech output from the translated at least one target language; and

an output coupled to the at least one processor, the output capable of providing the synthesized at least one speech output.

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Corresponding claims set forth the limitations of claim 19:

wherein translating comprises:

performing morphological analysis of the recognized at least one source expression using at least one source language dictionary and at least one source language morphological rule;

generating at least one sequence of analyzed morphemes;

performing syntactic source language analysis using grammar rule-based processing and example-based processing;

generating at least one source language syntactic representation;

performing source language to target language transfer using at least one example database and at least one thesaurus, wherein the morphological analysis and the syntactic source language analysis are independent of the transfer and a domain.

Corresponding claims set forth the limitations of independent claim 25:

A computer readable medium containing executable instructions which, when executed in a processing system, causes the system to perform a method for spoken language translation, the method comprising:

receiving at least one speech input comprising at least one source language;

recognizing at least one source expression of the at least one source language;

translating the recognized at least one source expression from the at least one source language to at least one target language;

synthesizing at least one speech output from the translated at least one target language; and

providing the at least one speech output.

Corresponding claims set forth the limitations of claim 32:

wherein translating comprises:

performing morphological analysis of the recognized at least one source

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expression using at least one source language dictionary and at least one source language morphological rule;

generating at least one sequence of analyzed morphemes;

performing syntactic source language analysis under grammar rule-based processing an example based processing;

generating at least one source language syntactic representation; and

performing source language to target language transfer using at least one example database and at least one thesaurus, wherein the morphological analysis and the syntactic source language analysis are independent of the transfer and a domain.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 to 3, 6, 7, 12 to 14, 17, 18, 23 to 27, 30 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by *Asano et al.* ('721).

Concerning independent claims 1, 12 and 25, *Asano et al.* ('721) discloses a method, apparatus and computer readable medium for speech recognition and natural language translation, comprising:

“receiving at least one speech input comprising at least one source language” --
a speech input section 1 has a device for transforming speech into a speech signal

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(column 6, lines 14 to 21: Figure 1); source languages include Japanese and English (column 6, lines 1 to 13);

“recognizing at least one source expression of the at least one source language” -- recognition section 4 performs sentence speech recognition on the basis of speech input parameters (column 6, lines 40 to 52: Figure 1);

“translating the recognized at least one source expression from the at least one source language to at least one target language” -- translation section 11 translates the language of the speech recognition result output from the speech recognition unit 10 into a different language (column 7, lines 41 to 54: Figure 1);

“synthesizing at least one speech output from the translated at least one target language” -- a synthesized sound corresponding to the translated version of the sentence is generated (column 11, lines 48 to 56);

“providing the at least one speech output” -- the generated synthesized sound is output (column 11, lines 48 to 56).

Concerning claims 2, 13 and 26, *Asano et al. (721)* discloses that the probability of correct recognition may be reduced by noise (column 16, lines 4 to 11).

Concerning claims 3, 14 and 27, *Asano et al. (721)* discloses:

“generating at least one intermediate data structure, wherein the at least one intermediate data structure comprises at least one word graph and at least one n-best list, wherein the at least one intermediate data structure encodes at least one recognition hypothesis” -- under linguistic restrictions, a plurality of probable sentences obtained (“n-best list”) are output to the example search section (column 9, lines 10 to

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17); loose linguistic restrictions are performed with a bigram or a trigram (column 8, line 49 to column 9, line 6); a bigram or a trigram is a "word graph";

"generating at least one candidate recognized source expression by processing the at least one intermediate data structure using at least one model, wherein the at least one model is a model selected from the group comprising a general language model and a domain model" -- the loose linguistic restrictions are imposed by a language model upon the bigram or trigram to obtain the plurality of probable sentences (column 8, lines 49 to 67).

Concerning claims 6, 17 and 30, *Asano et al. (721)* discloses natural language processing (column 2, lines 36 to 42) of spoken sentences such as "I go to school" or "He visits a company" (column 9, line 66 to column 10, line 8) having words and phrases.

Concerning claims 7, 18 and 31, *Asano et al. (721)* discloses statements such as "We are fully booked" and questions such as "Is your reservation ready?" are registered in an example data base 8 (column 12, lines 25 to 36); translated examples are generated as synthesized sound and output (column 11, lines 42 to 49).

Concerning claim 23, *Asano et al. (721)* discloses an input device including a microphone (column 6, lines 14 to 17).

Concerning claim 24, *Asano et al. (721)* discloses an analog-to-digital converter and an amplifier (column 6, lines 14 to 17); speech synthesis (column 11, lines 42 to 56) implicitly involves a speaker and a digital-to-analog converter.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 5, 15, 16, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Asano et al. (721)* in view of *Gould*.

Concerning claims 4, 15 and 28, *Asano et al. (721)* suggests that one of the examples corresponding to the highest degree of similarity from the plurality of probable sentences is calculated and selected automatically, but omits selecting one candidate recognized source expression from a graphical user interface or a voice command interface. However, *Gould* teaches a related speech recognition method and apparatus involving a choice list of the n-best words corresponding to a spoken input (Figures 36 to 45), one of which the user selects as the correct word from a graphical user interface by either a keystroke or a spoken choice command (column 30, line 40 to column 32, line 37). It would have been obvious to one of ordinary skill in the art to select a correct word from a choice list in a graphical user interface of n-best words for the purpose of adaptively correcting recognition errors as taught by *Gould* in the speech recognition method and system of *Asano et al. (721)*.

Concerning claims 5, 16 and 29, *Asano et al. (721)* omits confirming the at least one candidate recognized source expression from a graphical user interface or a voice

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command interface. However, *Gould* teaches a related speech recognition method and apparatus involving a choice list of the n-best words corresponding to a spoken input (Figures 36 to 45), where a user confirms a correct speech recognition result from a graphical user interface by either a keystroke or a spoken choice command indicating the first choice in the list is correct ("F1" key or "choose-1" "okay" spoken commands)(column 31, lines 5 to 11; column 31, lines 44 to 47). It would have been obvious to one of ordinary skill in the art to confirm a correct word from a choice list in a graphical user interface of n-best words for the purpose of adaptively correcting recognition errors as taught by *Gould* in the speech recognition method and system of *Asano et al.* (721).

Conclusion

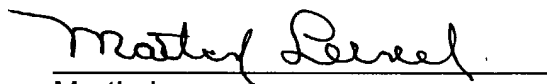
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (703) 308-9064. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML
10/27/04


Martin Lerner
Examiner
Group Art Unit 2654

Continuation of Attachment(s) 6). Other: IDS's: 6/21/01; 8/29/01; 9/24/01; 2/7/02; 3/20/02; 10/03/02.